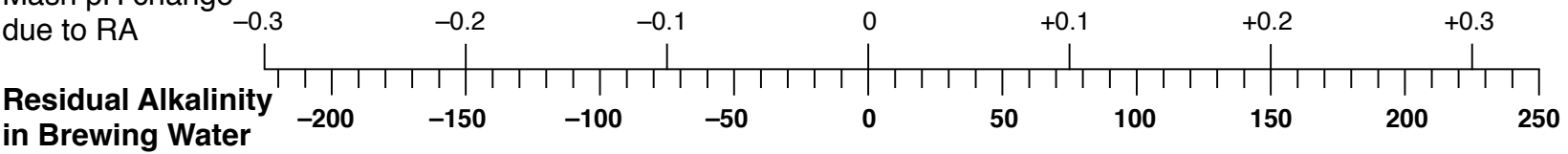
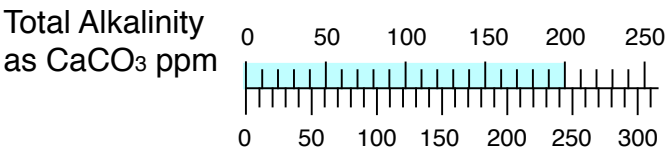
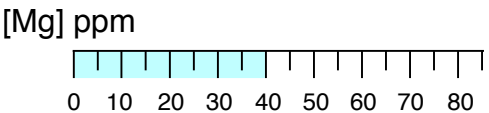
Residual Alkalinity Nomograph

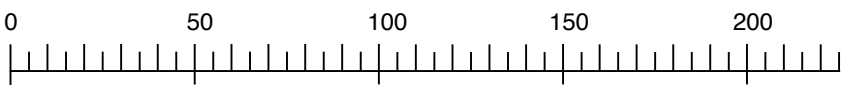
Change in base malt mash pH due to RA.
(measured at room temperature)

Suggested Beer Color Guide due to Amount of Residual Alkalinity in Brewing Water



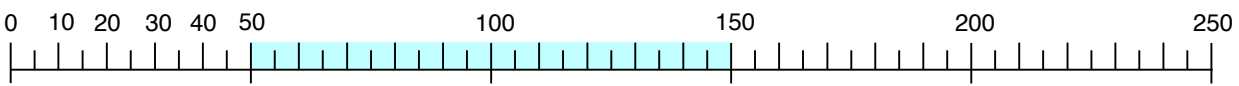






Effective Hardness

Note: This is not the same as Total Hardness as $CaCO_3$.



To Use:

1. Draw a line between the Calcium and Magnesium concentrations to determine the Effective Hardness of your water.
2. Draw a line from the Effective Hardness value through the Total Alkalinity of your water to determine the Residual Alkalinity. The approximate effect of the residual alkalinity on the mash pH is shown above.
3. The beer color scale is a suggestion to help you choose a beer style with enough specialty malt acidity to balance the indicated amount of residual alkalinity in the brewing water in order to achieve a mash pH in the preferred range.
4. The preferred range of mash pH, for all styles, regardless of color, is 5.2 to 5.6 as measured at room temperature.